Fire Program Analysis – Preparedness Module
Data Requirements for Historic Analysis

Issue: There is a need to provide FPA-PM with a fire event scenario based on historic fire occurrence and historic weather data. Fire planning units (FPU) preparing to perform the Historic Analysis have repeatedly asked the question, "How many years of historic data are required by the FPA system?"

Background and Assumptions: FPA is being developed to ensure that it is scientifically based and peer reviewable. The FPA development team enlisted the opinions of researchers several times during the development of the historic analysis portion of FPA. One of the elements in need of peer review was the quantity of data needed to perform statistically sound analysis. The simple answer from the research community is that more data is better but the practical consideration is that there is more effort and cost associated with providing the system more data. To be efficient, FPUs only want to provide the minimum input data required for valid analysis.

The four FPA-PM prototypes were asked to gather, correct, and use 22 years of data for their analyses. This relatively long period of data would allow for statistical analysis of input data over various lengths of time, i.e. 20 years, 10 years, and 5 years. Statistical analysis of the historic analysis data will continue, but will not likely be available when the FPA-PM system becomes available to FPUs.

Recommendation: The FPA development team and the FPA Implementation and Coordination Group recommend that the most recent ten years of fire occurrence and weather data be used when performing analysis. For analysis taking place today the most recent ten years would be calendar years 1994 to 2003. This will provide fire planning units the consistent guidance they have requested.

This is interim guidance until peer reviewed statistical analysis of our overall historic analysis process can be completed.

If ten years of data are not available for the FPU or are not available for all of the FPU partners, then use the most recent data years that are available. The FPA development team recognizes that this could lead to FPU partners inputting differing lengths of historic analysis data. In the interim this is the best guidance we can provide.

Additional: The data sources for fire occurrence are FAMWEB/NIFMID, SACS, etc. All of this data needs to be checked to ensure that location, cause, and time of discovery data are accurate, and that the records do not duplicate fires reported by another agency.

The sources for weather data could be FAMWEB/WIMS, RAWS, manual stations, or from GRID weather. Desert Research Institute (DRI) is currently under contract to establish valid RAWS weather records for long term FPA and NFDR use. The GRID weather feature will also have a function to repair bad data. Data from manual stations will have to be validated and entered into .mdb format for use in PCHA99 by the FPU.